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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/055,841 | 01/23/2002 | Shinichi Mine | 2552-000009 | 7874 |

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| EXAMINER |
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LE, VU

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| ART UNIT | PAPER NUMBER |
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2613

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/055,841

Applicant(s)

MINE, SHINICHI

Examiner

Vu Le

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-23-02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent; or
(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for the purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English.

2. **Claims 1, 5, 8-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Seo et al, US 6,208,688.**

Re claim 5, Seo et al discloses a transcoding apparatus (figs. 1 & 7) of converting first coded data (R1 "Input Bitstream"), which is obtained from a plurality of pictures of a moving-picture by performing a coding process including quantization (col. 3, lines 10-13, 23-34), into second coded data (R2 "Output Bitstream", the transcoding apparatus (figs. 1 & 7) comprising:

an inverse-quantization unit which performs inverse-quantization, corresponding to the quantization, on the first coded data respectively corresponding to macroblocks included in a plurality of slices of each of the plurality of pictures (12, also fig. 7: 77-80; col. 7, lines 15-23);

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and a generating unit which performs requantization on the inverse-quantized data respectively corresponding to the macroblocks by using a corresponding one of requantization scales corresponding to slices, to which the macroblocks respectively belong, to generate the second coded data (13, also fig. 7: 79-80, col. 8, lines 25-51).

Claim 1 recites "[A] transcoding method of converting first coded data, which is obtained from a plurality of pictures of a moving-picture by performing a coding process including quantization, into second coded data, the transcoding method comprising the steps of: performing inverse-quantization, corresponding to the quantization, on the first coded data respectively corresponding to macroblocks included in a plurality of slices of each of the plurality of pictures; and performing requantization on the inverse-quantized data respectively corresponding to the macroblocks by using a corresponding one of requantization scales corresponding to slices, to which the macroblocks respectively belong, to generate the second coded data[.]"

(Claim 1 is a method corresponding to the apparatus of claim 5, thus, the method steps have been analyzed and rejected w/r to claim 5. Seo et al discloses both a transcoder and a corresponding method).

Claim 8 is substantially the same as claim 1 in addition to the step of "determining a level of importance of each of the macroblocks; determining a requantization scale based on the level of importance; and performing requantization on the inverse-quantized data by using the requantization scale to generate the second coded data" as claimed.

The analysis and rejection set forth for claims 1 and 5 also apply for claim 8. Furthermore, Seo et al further discloses determining a level of importance of each of the macroblocks; determining a requantization scale based on the level of importance; and performing requantization on the inverse-quantized data by using the requantization scale to generate the second coded data as claimed (See fig. 7, col. 7, line 15 – col. 8, line 51).

Re claim 9, the transcoding method according to claim 8, wherein the step of determining the level of importance includes a step of detecting a noticed region in each of the plurality of pictures.

(In Seo et al, the step of detecting a noticed region is performed in step 72 of figure 7.)

Re claim 10, the transcoding method according to claim 9, wherein the noticed region is specified by detecting an edge in each of the plurality of slices.

(In Seo et al, detecting an edge in each of the slices is by detecting the "Next_slice_bit" (col. 8, lines 31-34). The next slice is then subjected to transcoding by step 72 of figure 7.)

Re claim 11, the transcoding method according to claim 8, wherein the level of importance is determined according to a position of each of the plurality of slices.

(This is inherent in Seo et al since MPEG-2 establishes hierarchy of slice positions.)

Re claim 12, the transcoding method according to claim 9, wherein the level of importance is determined according to a combination of the detected result of the noticed region and a position of each of the plurality of slices.

(Claim 12 has been analyzed and rejected w/r to claims 8-11. See also fig. 7.)

3. Claims 2-4, 6-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Satoh et al, US 6,658,157.

Re claim 6, Satoh et al discloses a transcoding apparatus (fig. 28) of converting first coded data ("Input Compressed Image Information"), which is obtained from a plurality of pictures of a moving-picture by performing discrete cosine transform (DCT) and performing a coding process including quantization (fig. 1, col. 9, line 1 – col. 10, line 43), into second coded data ("Output Compressed Image Information"), the transcoding apparatus comprising:

an inverse-quantization unit which performs inverse-quantization, corresponding to the quantization, on the first coded data respectively corresponding to macroblocks of each of the plurality of pictures (26, col. 23, lines 12-35);

an obtaining unit which obtains DC-component difference values of DCT coefficients of each of the macroblocks of an intra-frame coded intra picture included in the first coded data (27, col. 23, line 36 – col. 24, line 15, also fig. 27, col. 22, lines 5-41, in these segments, the first coded data represent, inter alia, DC-component difference value);

and a generating unit which performs requantization on the inverse-quantized data respectively corresponding to the macroblocks by using a requantization scale corresponding to a corresponding one of the obtained DC-component difference values respectively corresponding to the macroblocks of the intra picture to thereby generate the second coded data (28, col. 23, line 36 – col. 24, 30, in this segment, the quantizer 28 performs requantization based on quantization scale(s) generated from code size controller 31, wherein, one of DC-component difference values, resulted from band limiter 27, contributes to quantization scale(s) determination).

Claim 7 recites “[A] transcoding apparatus of converting first coded data, which is obtained from a plurality of pictures of a moving-picture by performing discrete cosine transform (DCT) and performing a coding process including quantization, into second coded data, the transcoding apparatus comprising: an inverse-quantization unit which performs inverse-quantization, corresponding to the quantization, on first coded data respectively corresponding to macroblocks of each of the plurality of pictures; an obtaining unit which obtains DC-component difference values of DCT coefficients of each of the macroblocks of an intra-frame coded intra picture included in the first coded data; and a generating unit which performs requantization on the inverse-quantized data respectively corresponding to the macroblocks by using requantization scales according to slices, to which the macroblocks respectively belong, and according to the obtained DC-component difference values respectively corresponding to the macroblocks of the intra picture to generate the second coded data.”

(Claim 7 is substantially the same as claim 6, thus it has been analyzed and rejected w/r to claim 6. Furthermore, Satoh et al discloses re-encoding in the coded bit stream conforms to MPEG-2, which establishes that requantization on the inverse-quantized data respectively corresponding to the macroblocks by using requantization scales according to slices as claimed, see figs. 23-25).

Claim 2 is a method claim directly corresponds to the apparatus claim 6, thus, it has been analyzed and rejected w/r to claim 6. Satoh et al discloses both the system and method (Summary of the Invention).

Claim 3 recites "[T]he transcoding method according to claim 2, wherein one of the macroblocks belonging to a noticed region is detected according to the obtained DC-component difference values respectively corresponding to the macroblocks of the intra picture, and the second coded data is generated by using the requantization scale corresponding to the macroblock belonging to the noticed region, and the requantization scale which corresponds to each of the macroblocks belonging to the other regions and differs from the requantization scale corresponding to the macroblock belonging to the noticed region[.]"

(Satoh et al discloses the above aspect as claimed. See col. 23, lines 7-55).

Claim 4 is a method claim directly corresponds to the apparatus claim 7, thus, it has been analyzed and rejected w/r to claims 6-7. Satoh et al discloses both the system and method (Summary of the Invention).

Contact


4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vu Le whose telephone number is 703-308-6613. The examiner can normally be reached on M-F 8:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


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